

TECHNOLOGY NEEDS/OPPORTUNITIES STATEMENT REMOTE MONITORING SYSTEM UPGRADES FOR THE S&M PROGRAM

Identification No.: RL-DD055

Date: August 2001

Program: Surveillance and Maintenance

OPS Office/Site: Richland Operations Office/ Hanford Site

PBS No.: RL-CP01

Waste Stream: N/A

TSD Title: N/A

Waste Management Unit (if applicable): N/A

Facility: All facilities in long term S&M

Priority Rating: This entry addresses the Accelerated Cleanup: Paths to Closure (ACPC)
Priority:

- _____ 1. Critical to the success of the Accelerated Cleanup: Paths to Closure (ACPC)
- _____ 2. Provides substantial benefit to the ACPC projects (e.g., moderate to high lifecycle cost savings or risk reduction, increased likelihood of compliance, increased assurance to avoid schedule delays)
- X 3. Provides opportunities for significant, but lower cost savings or risk reduction, and may reduce uncertainty in ACPC project success.

Need Title: Remote monitoring system upgrades for the Surveillance and Maintenance Program.

Need/Opportunity Category: Technology opportunity; the project desires an alternative to the current or planned baseline technology/process (i.e., a baseline exists but can be improved).

Need Description: As technology progresses, the remote monitoring system can be improved to save money and increase capability. Upgrades may include modification of software, hardware, such as computer upgrades or the use of fiber optics, or conversion to a new system.

Schedule Requirements:

Earliest Date Required: 10/1/2001

Latest Date Required: 9/30/2046

Problem Description: The problem is one of upgrading the current system with improved technology.

Benefit to the Project Baseline of Filling Need: Meeting this need would result in the system not becoming obsolete over time.

Functional Performance Requirements: Software and system components must be compatible with the current system or replace the current system. Potential upgrades include additional control features, Microsoft Windows operating system, local area network accessibility, increased functions and better (more reliable) equipment.

WBS No.
1.4.03.5.1.01.07.01.02

TIP No.
N/A

Relevant PBS Milestone: PBS-MC-030

Justification for Need:

Technical: Upgrades will increase efficiency and output of the system.

Regulatory: Regulations require the control of contamination. For facilities in surveillance and maintenance, control of contamination is accomplished by monitoring the facilities and maintaining them as needed.

Environmental Safety and Health: Contamination control is needed to reduce the risk of an environmental release. Remote monitoring also reduces the risk to personnel who would otherwise be required to enter the facilities for inspection.

Cost Savings Potential (Mortgage Reduction): Rough order of magnitude (ROM) life cycle cost (LCC) savings of \$10M. LCC savings estimate is based on the assumption that remote monitoring system upgrades would save approximately 1 person year per year for 100 years at a cost of \$100K per person year. A remote monitoring system is less costly to operate than scheduling and performing regular inspections of the facilities.

Cultural/Stakeholder Concerns: Maintaining facilities in a cost-effective manner is a stakeholder concern.

Other: None identified.

Current Baseline Technology: Siemens programmable logic control units, dedicated phone lines, fiber optic lines, and a personal computer.

End User: Environmental Restoration Project

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